building advisory committee

building program informational packet

office of physical planning
university of minnesota
december 1979

INTRODUCTION

The information contained in this packet is not meant to be the last word in developing a building program. Instead it is a loosely structured state-of-the-art reference manual that, if not providing answers, will at least hopefully raise the right questions.

The purpose of a building program generally should be to:

- delineate and clarify real space needs.
- document for central administration's review the relationship of these needs to enrollment, growth, changing educational or research goals and efficiency and utilization the total space envelope.
- translate these needs into environmental and functional criteria for use by the architect in organizing building space.
- set priorities where budget/space trade-offs occur.

Ultimately, each program must be sensitive to the unique factors and conditions with which it must contend, and as such each will have a character all its own.

FOREWORD

Programming is a process leading to the statement of an architectural problem and the requirements to be met in offering a solution.

Programming is the process of probing for sufficient information to understand and define the problem.

Programming is problem seeking; design is problem solving.

Programming is analysis; design is synthesis.

Programming is not an algorithmic process; it is a heuristic process.

Programming is finding out what the whole problem is.

Programming is the basis for a more comprehensive solution.

Programming is the establishment of limits and the scope of possibilities.

Programming is processing raw data into useful and essential information.

Programming is a rational and explicit process in which decisions and information are displayed for close scrutiny.

Programming is a process requiring a high degree of communication.

Programming is the process of distinguishing between wants and needs.

Building Advisory Committee

Agenda for First Meeting:

1. Introductions of members

2. Project Definition

    a. legislative request and funding background
    b. committee/program overview
    c. departmental relationships and communications

3. Responsibilities of the Committee

    a. represents a broad view on program
    b. represents university wide interest
    c. provides a funnel for needed information
    d. translates academic program needs into facility requirements
    e. evaluates preliminary plans for program requirements

4. Role of Committee Chairperson(s)

    a. developing program content
    b. completing program on schedule

5. Role of Project Manager

    a. direction and instructions to architect
    b. responsibility to meet budget
    c. provide site analysis for program
    d. establish project development schedule

6. Committee Operation

    a. meeting minutes distributed by Physical Planning
    b. meeting dates and times set in advance
    c. schedules of activities and completion dates

7. Building Program Reviewed

    a. program format outlined to illustrate general objectives
    b. program content reviewed for scope of work involved
    c. program activity sequences defined

OUTLINE OF BUILDING PROGRAM CONTENT

1. Introduction

    A. Historical and General Background

        1. Department
        2. Program Areas
        3. Significance of Program

    B. Current Status and Needs

        1. Students
        2. Staff
        3. Facility Standards

2. Academic Brief

    A. Academic Program

        1. Mission and Objectives
        2. Number and Type of Student Served

            a. Courses and Curriculum
            b. Student Counts, FTE's, Enrollment Projections

        3. Staff

            a. Faculty
            b. Civil Service
            C. Research

    B. Continuing Education
    C. Research

3. Facility Requirements

    A. Introduction and Overview Comments
    B. Space Descriptions and Size (Sq. Ft.)

        1. Summary by Category of Space
        2. Coding and Explanation of Each Space

    C. Furnishings and Equipment Requirements Identified
    D. Functional Relationships Diagrams
    E. Phasing and Facility Requirement Priorities

4. Site Selection Study

5. General Requirements

    A. Codes
    B. Long Range Development Plan
    C. University Construction Standards
    D. Conservation of Resources
    E. Project Schedule
    F. Area/Budget Summary

Physical Planning Office
January 29, 1979

NARRATIVE OF
BUILDING PROGRAM CONTENT

I. Introduction

A. Historical and General Background

Describe highlights of the department's history and of the program for which the project is proposed. May point out major achievements or significance of program. May outline earlier requests to the Legislature for similar project and the University's commitment to the particular academic program. State amount funded. Describe any particular mandates contained in legislation or given by Central Administration.

B. Current Status and Needs Statement

Describe the existing educational facility (if any). Could point out the inadequacies of the existing facility, in areas of functional performance, location, equipment, etc. Outline any changes in the situation of the department which would necessitate future space modifications, growth, contraction. Briefly summarize the department's case (justification) for facilities. Can generally be gleaned from material presented to University Administration and Legislature.

II. Academic Brief

A. Academic Program

The Academic Brief should delineate the departmental goals and objectives in the areas of educational endeavors, regional significance, and community services. This section should also describe the department's organization for the accomplishment of the outlined goals and its educational mission.

This section should present an overview of the major academic programs taught by the department. It should deal mainly with on-campus instruction, as the facilities are usually designed to accommodate those programs only. Describe the services and courses offered to non-majors. Should also include a comprehensive listing of past (recorded) enrollment of students on campus F.T.E. (Full-Time Equivalent), graduate students (F.T.E.) and the number of staff required to service the educational needs of the enrolled students. For purposes of analysis, it is useful to list or tabulate, not only the number of registered students in the department, but the student credit hours compiled (or taken) in the courses offered by the department. The tabulation of staff size, both academic and civil service, per educational sections, within the unit is also helpful in determining the accommodations for the staff. Do not include adjunct staff who do not office in the department. Include all regular faculty, part-time and temporary faculty and undergraduate teaching and research assistants in the academic staff category.

From transferring the data obtained into F.T.E.'s and using space planning criteria based on F.T.E.'s, a tabulation of overall space requirements can be shown. This can then be broken down into specific area allocations.

C. Continuing Education

Describe aspects of Continuing Education program which may affect the function and design of the proposed facility.

D. Research

Describe aspects of this activity that will affect space requirements of the proposed facility.

III. Facility Requirements

This section constitutes the actual programming of building spaces. In this introduction the general purpose of the project should be stated indicating overview planning criteria. Following this should be a general listing of spaces and their area assignment. This list should be a logical extension of the needs and Academic Brief statements.

Specific requirements for each activity or space should include:
- Square footage
- Number of people
- Movable equipment
- Fixed equipment
- Quality of space
- Relationship to other activities or spaces

Describe variations in activity pattern of the space either under specific requirements or if more general in the introduction.
- Seasonal (summer, fall quarter, etc.)
- Night, day

Describe special phasing requirements.

The program must identify the priorities of facility needs to assist in formulating contingency space modifications to facilitate balancing program content with budget limits. This might take the form of a number of spaces identified as a group that could be eliminated from the program and/or also spaces where standards of size, furnishing, finishing, etc. could be reduced to less than optimum.

IV. Site Selection

The site selection is normally undertaken by the Office of Physical Planning and designates one or more locations for the building project which are selected based on the thorough consideration of the following factors:

- adequate site/building area
- compatibility with the campus' Long Range Development Plan

- accessibility (vehicular and pedestrian)
- relationship to transient parking
- availability of utilities (or disruption of major utilities)
- relationship to related programs or facilities
- relationship to adjacent facilities
- visual identity and orientation
- contribution to overall campus fabric
- ease of construction
- service accessibility
- optimum space consolidation, etc.

V. General Requirements

Provided by the Office of Physical Planning and deals in a generalized fashion with such topics as codes, Long Range Development Plan, University Construction Standards, conservation of State and University resources, Area/Budget and Schedule summaries.

The Area/Budget summary is a tabulation of the assignable and non-assignable areas for the building and lists the estimated building costs and non-building costs (such as Furnishings and Equipment costs, Site Development costs, Design Consultant fees, and Contingencies).

The Project Schedule should describe the estimated schedule for the most important steps in the various phases of the project development such as programming, designing, contract documents preparation, bidding, and estimated construction phases.

Building Program Activity Sequences

First	Committee operation and responsibilities. Review program content. Outline space data needed. Outline history, current situation and needs statements. Discuss general site considerations which may affect program.
Second	Receive and review space inventory data from department(s). Receive and review space standards. Obtain copies of existing floor plans (if applicable). Review existing spaces used by the department for function and efficiency. Outline Academic Program goals and objectives. Department's organization in general. Describe inter-campus and inter-departmental relationships.
Third	Obtain Department projections for growth. Obtain data on academic programs: enrollments (on-campus, daytime students, in Full-Time Equivalents), staffing (head count and F.T.E.'s), credit hours/contact hours (break down to classroom type and various lab types). Discuss application of space standards. Set criteria for space size and function.
Fourth	Prepare overall space computations for classroom, lab type or other type spaces. Discuss desired area breakdown of classrooms, labs and other functional spaces. Discuss faculty and staff offices; reconcile faculty office/research space relationships. Establish criteria for allocation of old and new spaces (if applicable). Discuss overall building areas and building efficiency ratio and check building area total against any imposed limits.
Fifth	Summarize types and number of primary spaces. Define and list service/supplementary spaces (such as storage, Audio-Visual, preparation spaces, workrooms, etc.). Discuss and define space relationships and flexibility. Allocate spaces in existing and new facility (if applicable). Finalize space allocation among departments. Introduce site evaluations. Determine space requirements and equipment program format.
Sixth	Collect and review Space Requirement Format draft. Define method for preparing space relationship diagrams. Finalize site recommendations. Establish contingency option for reducing program scope if it is greater than budgeted construction funds available.
Seventh	Prepare first draft of building program, discuss format and organization of materials. Discuss building and equipment costs and priorities. Review space relation diagrams.
Eighth	Finalize building program, prepare for release in draft form to University Senior Officers' review and approval.

EXAMPLE

PROJECT BUDGET

Land Acquisition		$ -0-
Construction Costs		$ 10,765,547
Non-Building Costs		
Consultant Fees	$ 650,000	
Equipment and Furnishings	$1,537,501	
Sitework	$ 753,588	
Other (contingency, supervision and miscellaneous)	$ 645,933	
TOTAL PROJECT COST		$ 14,352,569

Comments:

1. Non-Building costs typically run about 1/3 of the construction costs.

2. Equipment and Furnishings average about 10% of construction costs (8% of total project cost). Built-in equipment is normally included in the construction budget and therefore if any significant amount exists, it should be identified as to its extensiveness and complexity.

EXAMPLE

PROJECT SCHEDULE

	Time Period	Date
Building Advisory Committee Start		Sept. 7, 1978
Building Program Completed	3 months	Dec. 1, 1978
Schematic Design Completed	4 months	April 1, 1979
Regents and Legislative Committee Approval	1 month	May 1, 1979
Design Development Completed	4 months	Sept. 1, 1979
Construction Drawings Completed	7 months	April 1, 1980
Review and Corrections of Bid Documents	1 month	May 1, 1980
Receive Bids	1½ months	June 15, 1980
Legal Documents and Award of Contracts	1½ months	Aug. 1, 1980
Mid-Construction		July 1, 1981
Construction Completed	22 months	June 1, 1982

Guidelines to Determining Furnishing & Equipment Budgets for Capital Request Projects

1. University Experience has shown that for either new construction or major remodeling projects an allowance out of total project costs of 8% for equipment and furnishing should be adequate to meet the basic needs of nearly all newly created space.

2. Equipment and furnishings of a project should be defined as moveable items not in the construction contract which are needed to accomplish the stated program function of a space.

3. Project equipment and furnishings should not be provided that are intended to replace existing items.

4. Capital expenditure is an expenditure for long-term betterments properly chargeable to a capital assets account. As a general rule, this would exclude equipment and furnishing items with a useful life of less than five years.

building program work schedule

activity sequence	1	2	3	4	5	6	7	8
space inventory and standards	collect data	data reviewed	determine standards					
history and current situation	review and outline							
academic brief	needs statement outlined	goals and organization	data analysis for F.T.E.	overall space computation-area break-down				
space function and size		criteria for quantity of space	criteria for space sizes and functions	criteria for alloc. of old and new space	list numbers and types of spaces	review draft	bldg. costs and priorities	
furnishings and equipment					space and equipment format	review draft	equip. budget and priorities	
relationships		interdepart/ campus relationship	interspatial relations	reconcile use/quality operation	allocate old/new space	space relation diagrams		
priorities						program scope options	space and furnishings	
building program	site considerations			check gross area total	site evaluation	finalize site	draft program	edit/submit program